



PATENT
Attorney Docket No. MDS-020 (6219/6)

5/1/03
1-874070e
8/4/03

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT(S): Costa et al.
SERIAL NO.: 09/738,612 GROUP NO.: 2863
FILING DATE: December 15, 2000 EXAMINER: Michael P. Nghiem
TITLE: System for Normalizing Spectra

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. Copies of the patents and publications are enclosed.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- ☐ (1) within three (3) months of the **filing date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- ☒ (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and
- ☐ the requisite Statement is below, **OR**
- ☒ the requisite fee under 37 C.F.R. 1.17(p), namely **\$180.00**, is included herein, or
- ☐ (3) after the mailing date of a **final action** or **notice of allowance** but before the payment of the **issue fee**, **AND**

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- ☐ the requisite Statement is below, **AND**
- ☐ the requisite petition fee under 37 C.F.R. 1.17(p), namely **\$180.00** is included herein.

In addition, Applicants wish to call to the Examiner's attention Office Actions issued in the following commonly-owned, co-pending patent applications:

- 1) U.S. Serial No. 09/841,325, Attorney Docket No. MDS-009CN, filed on 4/24/01, by Modell et al.;
- 2) U.S. Serial No. 09/591,706, Attorney Docket No. MDS-012, filed on 6/9/00, by Nordstrom et al.;
- 3) U.S. Serial No. 09/738,614, Attorney Docket No. MDS-013A, filed on 12/15/00, by Kaufman et al.;
- 4) U.S. Serial No. 10/068,133, Attorney Docket No. MDS-013AC2, filed on 2/5/02, by Kaufman et al.;
- 5) U.S. Serial No. 09/738,147, Attorney Docket No. MDS-013B, filed on 12/15/00, by Kaufman et al.;
- 6) U.S. Serial No. 10/411,777, Attorney Docket No. MDS-013BC1, filed on 4/11/03, by Kaufman et al.;
- 7) U.S. Serial No. 10/178,772, Attorney Docket No. MDS-014CN, filed on 6/24/02, by Modell et al.;
- 8) U.S. Serial No. 10/122,429, Attorney Docket No. MDS-015CN, filed on 4/12/02, by Nordstrom et al.;
- 9) U.S. Serial No. 09/481,762, Attorney Docket No. MDS-016, filed on 1/11/00, by Modell et al.;
- 10) U.S. Serial No. 10/071,932, Attorney Docket No. MDS-022C1, filed on 2/8/02, by Nordstrom et al.;
- 11) U.S. Serial No. 10/192,820, Attorney Docket No. MDS-028, filed on 7/10/02, by Schomacker et al.;
- 12) U.S. Serial No. 10/099,881, Attorney Docket No. MDS-030, filed on 3/15/02, by Kaufman et al.;
- 13) U.S. Serial No. 10/273,511, Attorney Docket No. MDS-031, filed on 10/18/02, by Clune et al.;
- 14) U.S. Serial No. 10/192,836, Attorney Docket No. MDS-032, filed on 7/10/02, by Zelenchuk;
- 15) U.S. Serial No. 10/243,535, Attorney Docket No. MDS-033, filed on 9/13/02, by Schomacker et al.;
- 16) U.S. Serial No. 10/295,794, Attorney Docket No. MDS-034, filed on 11/15/02, by Schomacker et al.;
- 17) U.S. Serial No. 10/418,922, Attorney Docket No. MDS-035, filed on 4/18/03, by Flewelling et al.;
- 18) U.S. Serial No. 10/418,902, Attorney Docket No. MDS-035A, filed on 4/18/03, by Jiang et al.;
- 19) U.S. Serial No. 10/418,974, Attorney Docket No. MDS-035B, filed on 4/18/03, by Jiang;
- 20) U.S. Serial No. 10/418,668, Attorney Docket No. MDS-035D, filed on 4/18/03, by Costa et al.;
- 21) U.S. Serial No. 10/418,975, Attorney Docket No. MDS-035E, filed on 4/18/03, by Jiang et al.;
- 22) U.S. Serial No. 10/418,415, Attorney Docket No. MDS-035F, filed on 4/18/03, by Schomacker et al.;
- 23) U.S. Serial No. 10/419,181, Attorney Docket No. MDS-035G, filed on 4/18/03, by Jiang et al.; and
- 24) U.S. Serial No. 10/418,973, Attorney Docket No. MDS-035H, filed on 4/18/03, by Schomacker et al.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that [check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]:


- ☐ 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or
- ☐ 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Date: July 16, 2003
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| FORM PTO - 1449 | | | | ATTORNEY DOCKET NO.: MDS-020 | | | |
|---|------|--------------------|----------|---------------------------------------|-------|--------------------|-------------------------------|
| FIRST SUPPLEMENTAL | | | | APPLICANT(S): Costa et al. | | | |
| INFORMATION DISCLOSURE STATEMENT | | | | SERIAL NO.: 09/738,612 | | | |
| | | | | FILING DATE: December 15, 2000 | | GROUP: 2863 | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| EXAM. INIT. | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE |
| | A133 | 2002/0007123 A1 | 1/17/02 | Balas et al | 600 | 476 | 12/15/00 |
| | A134 | 3,632,865 | 1/4/72 | Haskell et al. | 178 | 6 | 12/23/69 |
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| | A149 | 5,424,543 | 06/13/95 | Dombrowski et al | 250 | 330 | 04/19/93 |
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FIRST SUPPLEMENTAL

INFORMATION DISCLOSURE STATEMENT

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| EXAM. INIT. | | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB CLASS | FILING DATE IF APPROPRIATE |
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| | A187 | 5,690,106 | 11/25/97 | Bani-Hashemi et al. | 128 | 653.1 | 6/30/95 |
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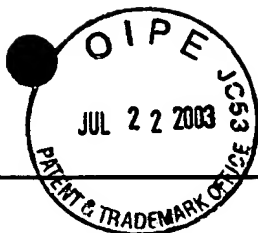
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| | B15 | 0 737 849 A2 | 10/16/96 | EP | | | | | |
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| | B17 | WO 97/48331 | 12/24/97 | PCT | | | 6/19/97 | | |
| | B18 | WO 98/05253 | 02/12/98 | PCT | | | 08/2/96 | | |
| | B19 | WO 98/24369 | 06/11/98 | PCT | | | 11/20/97 | | |
| | B20 | WO 99/18847 | 4/22/99 | PCT | | | 12/14/98 | | |
| | B21 | WO 99/20313 | 4/29/99 | PCT | | | 10/20/98 | | |
| | B22 | WO 99/20314 | 4/29/99 | PCT | | | 10/20/98 | | |
| | B23 | WO 99/47041 | 09/23/99 | PCT | | | 03/19/99 | | |
| | B24 | WO 99/57507 | 11/11/99 | PCT | | | 4/30/99 | | |
| | B25 | WO 99/57529 | 11/11/99 | PCT | | | 5/4/99 | | |
| | B26 | WO 00/15101 | 3/23/00 | PCT | | | 9/10/99 | | |
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| OTHER ART, JOURNAL ARTICLES, ETC. | | |
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| | C15 | Agrawal et al. (1999), "Fluorescence Spectroscopy of the Cervix: Influence of Acetic Acid, Cervical Mucus, and Vaginal Medications," <u>Lasers in Surgery and Medicine</u> , 25:237-249. |
| | C16 | Althof et al. (1997), "A rapid and automatic image registration algorithm with subpixel accuracy," <u>IEEE Transactions on Medical Imaging</u> , 16(3):308-316. |
| | C17 | Aström et al. (1999), "Motion estimation in image sequences using the deformation of apparent contours," <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 21(2):114-127. |
| | C18 | Balakrishnama et al, "Linear Discriminant Analysis – A Brief Tutorial," <u>Institute for Signal and Information Processing Department of Electrical and Computer Engineering</u> , 8 pages. |
| | C19 | Balas (1997), "An Imaging Colorimeter for Noncontact Tissue Color Mapping," <u>IEEE Transactions on Biomedical Engineering</u> , 44(6):468-474. |
| | C20 | Balas (2001), "A Novel Optical Imaging Method for the Early Detection, Quantitative Grading, and Mapping of Cancerous and Precancerous Lesions of Cervix," <u>IEEE Transactions on Biomedical Engineering</u> , 48(1):96-104. |
| | C21 | Balas et al. (1997), "A modular diffuse reflection and fluorescence emission imaging colorimeter for the in-vivo study of parameters related with the phototoxic effect in PDT," <u>SPIE</u> , 3191:50-57. |
| | C22 | Balas et al. (1998), "In Vivo Assessment of Acetic Acid-Cervical Tissue Interaction Using Quantitative Imaging of Back-Scattered Light: Its Potential Use for the In Vivo Cervical Cancer Detection Grading and Mapping," Part of EUROPTO Conference on Optical Biopsy, Stockholm, Sweden, <u>SPIE</u> , Vol. 3568:31-37. |
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| | C24 | Bessey et al. (1949), "The Fluorometric measurement of the nucleotides of riboflavin and their concentration in tissues," <u>J. Biol.-Chem.</u> , 180:755-769. |
| | C25 | Bors et al. (1998), "Optical flow estimation and moving object segmentation based on median radial basis function network," <u>IEEE Transactions on Image Processing</u> , 7(5):693-702. |
| | C26 | Bouthemy et al. (1999), "A unified approach to shot change detection and camera motion characterization," <u>IEEE Transactions on Circuits and Systems for Video Technology</u> , 9(7):1030-1044. |
| | C27 | Braichotte et al. (1995), "Clinical Pharmacokinetic Studies of Photofrin by Fluorescence Spectroscopy in the Oral Cavity, the Esophagus, and the Bronchi," <u>Cancer</u> 75(11):2760-2778. |
| | C28 | Brown (1990), "Chemometrics," <u>Anal. Chem.</u> , 62:84R-101R. |
| | C29 | Camus et al. (1997), "Real-time quantized optical flow," <u>Real-Time Imaging</u> , 3:71-86. |
| | C30 | Caplier et al. (1998), "Real-time implementation of a MRF-based motion detection algorithm," <u>Real-Time Imaging</u> , 4:41-54. |

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| FORM PTO - 1449 FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT | | ATTORNEY DOCKET NO.: MDS-020 APPLICANT(S): Costa et al. SERIAL NO.: 09/738,612 FILING DATE: December 15, 2000 GROUP: 2863 | |
| OTHER ART, JOURNAL ARTICLES, ETC. | | | |
| EXAM. INIT. | OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication) | | |
| | C31 | Contini et al. (1989), "Colposcopy and Computer Graphics: a New Method?" <u>Amer. J. Obstet. Gynecol.</u> , 160(3):535-538. | |
| | C32 | Craine et al. (1993), "Digital Imaging Colposcopy: basic concepts and applications," <u>Amer. J. Obstet. Gynecol.</u> , 82(5):869-873. | |
| | C33 | Craine et al. (1998), "Digital imaging colposcopy: Corrected area measurements using shape-from-shading," <u>IEEE Transactions on Medical Imaging</u> , 17(6):1003-1010. | |
| | C34 | Crisp et al. (1990), "The Computerized Digital Imaging Colposcope: Future Directions," <u>Amer. J. Obstet. Gynecol.</u> , 162(6):1491-1497. | |
| | C35 | Cronjé et al. (1997), "Effects of Dilute Acetic Acid on the Cervical Smear," <u>Acta. Cytol.</u> , 41:1091-1094. | |
| | C36 | Dickman et al. (2001), "Identification of Cervical Neoplasia Using a Simulation of Human Vision," <u>Journal of Lower Genital Tract Disease</u> , 5(3):144-152. | |
| | C37 | Drezek et al. (1999), "Light scattering from cells: finite-difference time-domain simulations and goniometric measurements," <u>Applied Optics</u> 38(16):3651-3661. | |
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| | C39 | Dumontier et al. (1999), "Real-time DSP implementation for MRF-based video motion detection," <u>IEEE Transactions on Image Processing</u> , 8(10):1341-1347. | |
| | C40 | Earnshaw et al. (1996), "The Performance of Camera Translation Direction Estimators from Optical Flow: Analysis, Comparison, and Theoretical Limits," <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 18(9):927-932. | |
| | C41 | Edebiri, A.A. (1990), "The relative significance of colposcopic descriptive appearances in the dianosis of cervical intraepithelial neoplasia," <u>Int. J. Gynecol. Obstet.</u> , 33:23-29. | |
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| | C43 | Ferris et al. (1998), "Colposcopy Quality Control: Establishing Colposcopy Criterion Standards for the NCI ALTS Trial Using Cervigrams," <u>J. Lower Genital Tract Disease</u> , 2(4):195-203. | |
| | C44 | Fleet et al. (1995), "Recursive Filters for Optical Flow," <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 17(1):61-67. | |
| | C45 | Gao et al. (1998), "A work minimization approach to image morphing," <u>The Visual Computer</u> , 14:390-400. | |
| | C46 | Gauch (1999), "Image Segmentation and Analysis Via Multiscale Gradient Watershed Hierarchies," <u>IEEE Transactions on Image Processing</u> , 8(1):69-79. | |
| | C47 | Haralick (1984), "Digital Step Edges from Zero Crossing of Second Directional Derivatives," <u>IEEE Transactions on Pattern Analysis and Machine Intelligence</u> , 6(1):58-68. | |
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OTHER ART, JOURNAL ARTICLES, ETC.

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| | C48 | Haris et al. (1998), "Hybrid Image Segmentation Using Watersheds and Fast Region Merging," <u>IEEE Transactions on Image Processing</u> , 7(12):1684-1699. |
| | C49 | Helmerhorst et al. (1987), "The accuracy of colposcopically directed biopsy in diagnosis of CIN 2/3." <u>Eur. J. Obstet. Gyn. Reprod. Biol.</u> , 24, 221-229. |
| | C50 | Horn et al. (1981), "Determining Optical Flow," <u>Artificial Intelligence</u> , 17(1-3):185-203. |
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| FORM PTO - 1449 FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT | | ATTORNEY DOCKET NO.: MDS-020 APPLICANT(S): Costa et al. SERIAL NO.: 09/738,612 FILING DATE: December 15, 2000 GROUP: 2863 | |
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